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PCT/EP2003/009822

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Translation



Applicant's or agent's file reference 55400	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009822	International filing date (day/month/year) 04 September 2003 (04.09.2003)	Priority date (day/month/year) 05 September 2002 (05.09.2002)
International Patent Classification (IPC) or national classification and IPC B06B 1/16		
Applicant WACKER CONSTRUCTION EQUIPMENT AG		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>4</u> sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 28 November 2003 (28.11.2003)	Date of completion of this report 26 November 2004 (26.11.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009822

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1, 3-8 _____, as originally filed
 pages _____, filed with the demand
 pages _____ 2, 2a _____, filed with the letter of _____ 19 July 2004 (19.07.2004)
- ☒ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____ 1-10 _____, filed with the letter of _____ 17 November 2004 (17.11.2004)
- ☒ the drawings:
 pages _____ 1/2-2/2 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 10	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 10	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 10	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

D1: DE 10 95 752 B (LOSENHAUSENWERK) 22 December 1960

D2: DE 100 38 206 A (WACKER WERKE KG) 21 February 2002

The subject matter of the invention is a vibration generator for soil compacting devices (independent claim 1).

The closest prior art is document D2, which discloses (the references between parentheses refer to that document) a vibration generator for soil compacting devices, said generator comprising unbalance shafts (2, 3; paragraph [0020]) which are parallel to one another and can be driven in counter-rotation at the same rotational speed, each unbalance shaft (2, 3) bearing an unbalance mass (15) that is stationary on the shaft and an unbalance mass (16) that can rotate relative to the shaft, and each of the unbalance shafts (2, 3) being associated with an adjusting device (17, 18) for adjusting the position of each movable unbalance

mass (16) relative to the unbalance shaft (2, 3) on which it is borne (paragraph [0029]).

Document D1 does not disclose the characterising features of claim 1, namely that

- (a) the relative positions can be adjusted by the adjusting devices during operation such that centrifugal forces generated by the unbalance masses during rotation of the unbalance shafts are fully cancelled out in any position of rotation of the unbalance shafts; and that
- (b) it is possible to alter the relative positions such that the magnitude of a total centrifugal force resulting from the unbalance masses is proportional to an advancing speed of the soil compacting device.

The subject matter of claim 1 is thus novel (PCT Article 33(2)).

The problem addressed by the invention is that of optimising the soil compacting.

The problem is solved by features (a) and (b). As a result of these features, the soil compacting force can be set proportionally to the speed, the compacting being less forceful at low speeds and more forceful at high speeds. The total compacting is thus always approximately the same, thereby optimising soil compacting.

Document D1 does not disclose the characterising features of claim 1 and also does not disclose a vibration generator with which the relative positions can be adjusted during operation.

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Consequently, a combination of documents D2 and D1 would not lead a person skilled in the art to a vibration generator as per claim 1.

The solution to this problem as proposed in claim 1 of the present application thus involves an inventive step (PCT Article 33(3)).

Claims 2 to 10 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.